<b>Atty. Docket No.:</b> 110.0023 0102	Serial No.: 09/898,238
Applicant(s): Lawrence P. WACKETT et al.	Confirmation No.: 7517
Filing Date: 3 July 2001	Group: 1652

## **U.S. PATENT DOCUMENTS**

Examiner Initial	Copy Enclosed	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
RH	X	3,779,869	12/18/73	Zienty	195	88	
i	X	4,075,321	02/21/78	Relyveld	424	92	
	X	4,138,290	02/06/79	McMullen et al.	195	3]	
	X	4,695,455	09/22/87	Barnes et al.	424	93	
•		4,745,064	05/17/88	Cook et al. (English Language equivalent to EPO 0 141 784)	435	257.1-	
	X	4,757,008	07/12/88	Reverman	435	94	
	X	4,798,786	01/17/89	Tice et al.	435	177	
	X	4,849,217	07/18/89	Soares et al.	424	93	
	X	4,918,016	04/17/90	Leuba et al.	435	176	
	X	5,073,677	12/17/91	Helmer et al.	800	205	
	X	5,143,847	09/01/92	Kawase et al.	435	288	
	X	5,318,913	06/07/94	Relyveld	435	520	
		5,429,949	07/04/95	Radosevich et al.	435	257.1	
	X	5,437,993	08/01/95	Visuri	捻	234	
	X	5,474,925	12/12/95	Maliyakal et al.	435	172.3	
	X	5,489,401	02/06/96	Freeman	264	4.3	
		5,508,193	4/16/96	Mandelbaum et al.	435	8762.5	
	X	5,824,512	10/20/98	Pazirandeh et al.	435	69.7	
	X	5,849,296	12/15/98	Navia et al.	424	178./	
	X	6,265,201 B1	07/24/01	Wackett et al.	435	257.3	
RH	X	6,284,522 B1	09/04/01	Wackett et al.	435	Z62.5	

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## INFORMATION DISCLOSURE STATEMENT

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Examiner	Сору	Document Number	Date	Country	C	lass	Sub	class	Trans	lation
Initial	Enclosed	0 141 784	10/29/84	EPO	CO	25	2/2/		Yes	No
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NO	X	0 218 571 A2	04/15/87	EPO			_	-		
RAH	X	0 234 415 A2	09/02/87	EPO		l,	1			
RV	X	0 302 284 B1	02/08/89	ЕРО		$ar{}$				
RA	X	0 340 378 B1	11/08/89	ЕРО						
RH	X	0 859 051 A1	08/19/98	EPO						
RH	X	DE 35 08 906 A1 (with English language abstract)	09/18/86	Germany						
RH	X	JP 616 9772 (with English language abstract)	06/21/94	Japan						
RH	X	RU 20 90 246 C1 (with English language abstract)	09/20/97	Russia						
RH	X	GB 2 244 711 A	12/11/91	United Kingdom		T				
RH	X	WO 90/07576(with English language abstract)	07/12/90	WIPO						
RH	X	WO 91/01087	02/07/91	WIPO		1				
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RH	X	WO 95/22625	08/24/95	WIPO			,			
RH	X	WO 97/15675	05/01/97	WIPO						
RH	X	WO 98/18941 (with English language abstract)	05/07/98	WIPO						
RH	X	WO 98/31816	07/23/98	WIPO						
RH	X	WO 01/55409 A2	08/02/01	WIPO		$I^-$	,			$\neg$

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OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)

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RY	X	Altschul et al., "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs," <i>Nucleic Acids Research</i> , 25:3389-3402 (1997).
RV	X	Arkin et al., "An algorithm for protein engineering: Simulations of recursive ensemble mutagenesis," <i>Proceedings of the National Academy of Sciences, USA</i> , 89:7811-7815 (1992).
RH		Armstrong et al., "Adsorption Catalyzed Chemical Hydrolysis of Atrazine," Environ. Sci. Technol., 2(9), 683-689 (1968).
RH	X	Austin et al., "Production and field performance of transgenic alfalfa ( <i>Medicago sativa</i> L.) expressing alpha-amylase and manganese-dependent lignin peroxidase," <i>Euphytica</i> , 85:381-393 (1995).
RH	X	Ausubel, et al., eds., <i>Current Protocols in Molecular Biology</i> , John Wiley & Sons, Inc., United States; title page, publication page, and table of contents only: 12 pages (1994).
RH	X	Baker, "Herbicide Resistance," <i>Tropical Grassy Weeds</i> , CAB International, Wallingford, England, Title page, publication page and pages 96-105 (1991).
RH	X	Bartel et al., "Isolation of New Ribozymes from a Large Pool of Random Sequences," <i>Science</i> , 261:1411-1418 (1993).
RB		Behki et al., "Metabolism of the Herbicide Atrazine by <i>Rhodococcus</i> Strains," <i>Applied and Environmental Microbiology</i> , 59(6), 1955-1959 (1993).
RH		Behki et al., "Degradation of Atrazine by <i>Pseudomonas</i> : N-Dealkylation and Dehalogenation of Atrazine and Its Metabolites," <i>J. Agric. Food Chem.</i> , 34, 746-749 (1986).
RH		Bergman et al., "Determination of Trace Amounts in Chlorine in Naphtha," <i>Anal. Chem.</i> , 29(2), 241-243 (1957).
RH	X	Bingham, "Registration of Alfalfa Hybrid Regen-Sy Germplasm for Tissue Culture and Transformation Research," <i>Crop Science</i> , 31:1098 (1991).
RY	X	Bock et al., "Selection of single-stranded DNA molecules that bind and inhibit human thrombin," <i>Nature</i> , 355:564-566 (1992).
RY	X	Box, et al., Statistics for Experimenters: An Introduction to Design, Data Analysis, and Model Building, John Wiley & Sons, Inc., New York, NY; Title page, publication page and table of contents only: 10 pages (1978).

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Examiner Initial	Copy Enclosed	Document Description
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	X	Brown et al., "Role of genetic background in somatic embryogenesis in <i>Medicago</i> ," <i>Plant Cell Tissue Organ Culture</i> , 4:111-122 (1985).
	X	Burchfield et al., "Pyridine-alkali reactions in the analysis of pesticides containing active halogen atoms," <i>Agricultural and Food Chemistry</i> , 6:106-110 (1958).
	X	Caldwell et al., "Limits of Diffusion in the Hydrolysis of Substrates by the Phosphotriesterase from <i>Pseudomonas diminuta</i> ," <i>Biochemistry</i> , 30(30):7438-7444 (1991).
	X	Calogero et al., "In vivo recombination and the production of hybrid genes," <i>FEMS Microbiology Letters</i> , 97:41-44 (1992).
RH	X	Caren et al., "Efficient Sampling of Protein Sequence Space for Multiple Mutants," <i>Bio/Technology</i> , 12:517-520 (1994).
1		Chang et al., "Construction and Characterization of Amplifiable Multicopy DNA Cloning Vehicles Derived from the P15A Cryptic Miniplasmid," <i>J. Bacteriol.</i> , 134(3), 1141-1156 (1978).
		Cook et al., "s-Triazines as Nitrogen Sources for Bacteria," J. Agric. Food Chem., 29, 1135-1143 (1981).
ref		Cook, "Biodegradation of s-triazine xenobiotics," <i>FEMS Microbiology Reviews</i> , 46, 93-116 (1987).
RH	X	Crossway et al., "Integration of foreign DNA following microinjection of tobacco mesophyll protoplasts," <i>Molecular and General Genetics</i> , 202:179-185 (1986).
RH	X	Cwirla et al., "Peptides on phage: A vast library of peptides for identifying ligands," <i>Proceedings of the National Academy of Sciences, USA</i> , 87:6378-6382 (1990).
RH	X	Daniell et al., "Containment of herbicide resistance through genetic engineering of the chloroplast genome," <i>Nature Biotechnology</i> , <i>16</i> :345-348 (1998).

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Examiner Initial	Copy Enclosed	Document Description	
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RY	X	Delagrave et al., "Searching Sequence Space to Engineer Proteins: Exponential Ensemble Mutagenesis," <i>Bio/Technology</i> , 11:1548-1552 (1993).	
RH	X	Delagrave et al., "Recursive ensemble mutagenesis," <i>Protein Engineering</i> , 6:327-331 (1993).	
RH	X	Dellaporta et al., "Molecular Cloning of the Maize <i>R-nj</i> Allele by Transposon Tagging with Ac," <i>Chromosome Structure and Function</i> , Plenum Press, New York, Title page, publication page and pages 263-282 (1988).	
RY		de Souza et al., "Identification of a Gene Cluster from <i>Pseudomonas</i> sp. ADP, Involved in Atrazine Biodegradation," <i>Abstracts of the 95th General Meeting of the American Society for Microbiology</i> , Abstract No. Q-89 (1995).	
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RY	X	Eaton et al., "Metabolism of dibutylphthalate and phthalate by <i>Micrococcus</i> sp. strain 12B," <i>Journal of Bacteriology</i> , 151(1):48-57 (1982).	
		Eaton et al., "Cloning and Analysis of s-Triazine Catabolic Genes from <i>Pseudomonas</i> sp. Strain NRRLB-12227," <i>Journal of Bacteriology</i> , 173, 1215-1222 (1991).	
		Eaton et al., "Cloning and Comparison of the DNA Encoding Ammelide Aminohydrolase and Cyanuric Acid Amidohydrolase from Three s-Triazine-Degrading Bacterial Strains," <i>Journal of Bacteriology</i> , 173(3), 1363-1366 (1991).	
RH	Х	Elhai et al., "Conjugal Transfer of DNA to Cyanobaceria," <i>Methods in Enzymology</i> , 167:747-754 (1988).	

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RH		EMBL Database entry TT3ITRA, Accession number M13165, July 16, 1988 Sequence: Huang et al., "Analysis of Tn3 sequences required for transposition and immunity, <i>Gene</i> , 41, 23-31 (1986).
RL	EMBL Database Entry RCTRZA Accession Number L16534; October 2, 19 Shao et al., <i>Rhodococcus corallinus</i> (NRRL 15444B) N-ethylammeline chlorohydrolase (trzA) gene, complete cds.	
BH	X	Epstein, "Estimation of Microquantities of Cyanide," <i>Analytical Chemistry</i> , 19: 272-274 (1947).
py		Erickson et al., "Degradation of Atrazine and Related S-Triazines," Critical Reviews in Environmental Control, 19, 1-13 (1989).
RH	X	Fadullon et al., "Degradation of atrazine in soil by Streptomyces," Journal of Environmental Science and Health B, 33(1):37-49 (1998).
RY	X	Flores et al., "Characterization of a glutaraldehyde stabilized yeast cell biocatalyst with β-galactosidase activity," <i>Journal of Fermentation and Bioengineering</i> , 81(6):524-529 (1996).
RY	X	Freeman et al., "Fixation and stabilization of <i>Escherichia coli</i> cells displaying genetically engineered cell surface proteins," <i>Biotechnology and Bioengineering</i> , 52(5): 625-630 (1996).
RH	Gallie et al., "The 5'-leader sequence of tobacco mosaic virus RNA enhances the expression of foreign gene transcripts in vitro and in vivo, <i>Nucleic Acids Research</i> , 15:3257-3273 (1987).	
RH	Х	Gallie, "Posttranscriptional Regulation of Gene Expression in Plants," Annual Review of Plant Physiology and Plant Molecular Biology, 44:77-105 (1993).
RH	X	Gamborg et al., "Nutrient Requirements of Suspension Cultures of Soybean Root Cells," <i>Experimental Cell Research</i> , 50:151-158 (1968).
RY		Giardina et al., "4-Amino-2-Chloro-1,3,5-triazine: A New Metabolite of Atrazine by a Soil Bacterium," <i>Agric. Biol. Chem.</i> , 44(9), 2067-2072 (1980).
RA	X	Goldman et al., "An Algorithmically Optimized Combinational Library Screened by Digital Imaging Spectroscopy," <i>Bio/Technology</i> , 10:1557-1561 (1992).
RH	- X	Habig et al., "Assays for Differentiation of Glutathione s-transferases," <i>Methods in Enzymology</i> , 77:398-405 (1981).

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RY	Hayashi et al., "Simultaneous Mutagenesis of Antibody CDR Regions by Overlap Extension and PCR," <i>Biotechniques</i> , 17:310-315 (1994).	
RV	X	Heijne et al., "Domain structure of mitochondrial and chloroplast targeting peptides," <i>European Journal of Biochemistry</i> , 180:535-545 (1989).
RY	X	Hermes et al., "Searching sequence space by definably random mutagenesis: Improving the catalytic potency of an enzyme," <i>Proceedings of the National Academy of Sciences</i> , USA, 87:696-700 (1990).
eff	Hsiao et al., "High-frequency transformation of yeast by plasmids containing the cloned yeast ARG4 gene," Proc. Natl. Acad. Sci. USA, 76(8), 3829-3833 (1979).	
RH	X	Ikuta et al., "The α-Amylase Gene as a Marker for Gene Cloning: Direct Screening of Recombinant Clones," <i>Biotechnology</i> , 8:241-242 (1990).
RV	Jessee et al., "Anaerobic Degradation of Cyanuric Acid, Cysteine, and Atrazine by a Facultative Anaerobic Bacterium," <i>Applied and Environmental Microbiology</i> , 45(1), 97-102 (1983).	
RH	X	Jobling et al., "Enhanced translation of chimaeric messenger RNAs containing a plant viral untranslated leader sequence," <i>Nature</i> , 325:622-625 (1987).
RY	X	Jones et al., "Degradation of atrazine in estuarine water/sediment systems and soils," <i>Journal of Environmental Quality</i> , 11(4):632-638 (1982).
RA	X	Katz et al., "Cloning and Expression of the Tyrosinase Gene from Streptomyces antibioticus in Streptomyces lividans," Journal of General Microbiology, 129:2703-2714 (1983).
RH	X	Kauffmann et al., "Entrapment of atrazine chlorohydrolase in sol-gel glass matrix," Journal of Biotechnology, 62(3):169-176 (1998).
RH	Х	Keegstra et al., "Chloroplastic Precursors and Their Transport Across the Envelope Membranes," <i>Annual Review of Plant Physiology and Plant Molecular Biology</i> , 40:471-501 (1989).
RH	Х	Kennedy et al., "Principles of immobilization of enzymes," <i>Handbook of Enzyme Biotechnology</i> , 3 <sup>rd</sup> Edition, Wiseman, ed., Ellis Horwood Limited, Hertfordshire, Great Britain, Title page, publication page and pages 235-310 (1995).

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RA) X		Kontchou et al., "Rapid biodegradation of the herbicide atrazine in soil inoculated with a pure bacterial culture," Proceedings of the IX Simposium of Pesticide Chemistry: Mobility and Degradation of Xenobiotics, (A.A.M. Del Re et al., eds.), Piacenza, Italy, 11-13 October 1993, pp. 533-536 (Instituto di Chimica Agraria ed Ambientale, Università Cattolica del Sacro Cuore).
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	X	LeBaron, "Ways and means to influence the activity and the persistence of triazine herbices in soils," <i>Residue Reviews</i> , 32:311-353 (1970).
	X	LeBaron et al., "Summary of Accomplishments, Conclusions, and Future Needs," <i>Herbicide Resistance in Plants</i> , Wiley, N.Y., Title page, publication page and pages 349-362 (1982).
	X	LeBaron et al., "Herbicide resistance in weeds and crops," <i>Managing Resistance to Agrochemicals</i> , ACS Symposium Ser. 421, ACS Books, Washington, D.C., Title page, publication page and pages 336-352 (1990).
RV	X	Lee et al., "Superoxide dismutase: an evolutionary puzzle," <i>Proceedings of the National Academy of Sciences, USA</i> , 82:824-828 (1985).
RY		Leong et al., "Heme Biosynthesis in <i>Rhizobium</i> ," <i>J. Bio. Chem.</i> , 257(15) 8724-8730 (1982).
24	X	Leung et al., "A Method for Random Mutagenesis of a Defined DNA Segment using a Modified Polymerase Chain Reaction," <i>Technique</i> , 1:11-15 (1989).
BY	X	Liu et al., "Ecology and evolution of microbial populations for bioremediation," <i>Trends in Biotechnology</i> , 11(8):344-352 (1993).
RY	X	Loos, "Indicator media for microorganisms degrading chlorinated pesticides," Canadian Journal of Microbiology, 21:104-107 (1975).
BB		Maleki et al., "Degradation of Atrazine by Soil Consortia: Characterization of Enzymatically Active Fractions from Cell-Bound and Cell-Free Enrichment Cultures," Abstracts of the 95th General Meeting of the American Society for Microbiology, Abstract No. Q-88 (1995).

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RV	ar:	Mandelbaum et al., "Rapid Hydrolysis of Atrazine to Hydroxyatrazine by Soil Bacteria," <i>Environ. Sci. Technol.</i> , 27(9) 1943-1946 (1993).	
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RH		Maniatis et al., <i>Molecular Cloning: A Laboratory Manual</i> , Cold Springs Harbor Press: Cold Spring Harbor, NY, Title page, publication page and table of contents (pp. v-xxxii) (1989).	
RY	X	Marton et al., "DNA nicking favors PCR recombination," <i>Nucleic Acids Research</i> , 19:2423-2426 (1991).	
RIP	. X	Mattan, Cynthia "Dechlorination of Atrazine by the Enzyme Atrazine Chlorohydrolase During Simulated Water Treatment Processes," Master of Sciences Thesis, University of Minnesota, 48 pages (1998).	
Rt		Maxam et al., "Sequencing End-Labeled DNA with Base-Specific Chemical Cleavages," <i>Methods in Enzymology</i> , 65, 499-561 (1980).	
RNA	X	McCafferty et al., "Phage antibodies: filamentous phage displaying antibody variable domains," <i>Nature</i> , 348:552-554 (1990).	
RY	Messing et al., "A System for Shotgun DNA Sequencing," Nucl. Acids Res., 9 309-321 (1981).		
RH	X	Mets et al., "Prospects for Genetic Modification of Plants for Resistance to Triazine Herbicides," <i>Biotechnology in Plant Science: Relevance to Agriculture in the Eighties</i> , Academic Press, Florida, Title page, publication page and pages 301-312 (1985).	
RN	X	Meyerhans et al., "DNA recombination during PCR," <i>Nucleic Acids Research</i> , 18:1687-1691 (1990).	
RV	X	Minshull, "Cleaning up our own backyard: developing new catabolic pathways to degrade pollutants," <i>Chemistry &amp; Biology</i> , 2(12):775-780 (1995).	

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RD	- X	Minshull et al., "Metabolic Pathway Engineering by Directed Evolution," abstract, Biodegradation of Organic Pollutants, UIB-GBF-CSIC-TUB Symposium, Mallorca, page 48-49 (June 29 - July 3, 1996).
RH	X	Minshull, "Evolving Enzymes for Biodegradation and Biosynthesis," Abstract, 4:10, <i>IBC's 2<sup>nd</sup> Annual Symposium on Exploiting Enzyme Technology</i> , International Business Communications, 4 pages (February 20, 1997).
RA	X	Mosbach et al., eds., <i>Methods in Enzymology Vol. 135. Part B. Immobilized Enzymes and Cells</i> , Academic Press, Orlando, FL; title page, publication page, and table of contents only: 5 pages (1985).
RY		Mulbry, "Purification and Characterization of an Inducible s-Triazine Hydrolase from <i>Rhodococcus corallinus</i> NRRL B-15444R," <i>Applied and Environmental Microbiology</i> , 60(2), 613-618 (1994).
RY	X	Mulchandani et al., "Detoxification of organophosphate nerve agents by immobilized <i>Escherichia coli</i> with surface-expressed organophosphorus hydrolase," <i>Biotechnology and Bioengineering</i> , 63(2):216-223 (1999).
RA	X	Mullineaux, "Genetically Engineered Plants for Herbicide Resistance," <i>Plant Genetic Manipulation for Crop Protection</i> , CAB International, Wallingford England, pages 75-107 (1992).
RA	X	Murray et al., "Codon usage in plant genes," <i>Nucleic Acids Research</i> , 17:477-498 (1989).
RA		Nagy et al., "A Single Cytochrome P-450 System is Involved in Degradation of the Herbicides EPTC (S-Ethyl Dipropylthiocarbamate) and Atrazine by <i>Rhodococcus</i> sp. Strain NI86/21," <i>Applied and Environmental Microbiology</i> , 61(5), 2056-2060 (1995).
RV		Nair et al., "Effect of Two Electron Acceptors on Atrazine Mineralization Rates in Soil," <i>Environ. Sci. Technol.</i> , 26, 2298-2300 (1992).
RN	Х	National Institutes of Health, "BLAST 2 Sequences," [online] United States; retrieved November 26, 2001, from the Internet: <url:http: bl2.html="" gorf="" www.ncbi.nlm.nih.gov="">, 1 page.</url:http:>

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Examiner Initial	Copy Enclosed	Document Description
RA	X	National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health, GenBank Locus No. PAU55933, Accession No. U55933, "Pseudomonas ADP atrazine chlorohydrolase (atzA) gene, complete cds," [online]. Bethesda, MD [retrieved on January 2, 2001]. Retrieved from Internet URL: <www.ncbi.nlm.nih.gov entrez="" query.fcgi?cmd="Retrieve&amp;db=Nucleotide&amp;list_uids=3766245&amp;dopt=GenBank">, 2 pages.</www.ncbi.nlm.nih.gov>
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RN	X	Nissim et al., "Antibody fragments from a 'single pot' phage display library as immunochemical reagents," <i>EMBO Journal</i> , 13:692-698 (1994).
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Atty. Docket No.: 110.0023 0102	Serial No.: 09/898,238
Applicant(s): Lawrence P. WACKETT et al.	Confirmation No.: 7517
Filing Date: 3 July 2001	Group: 1652

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RY	,	Sadowsky et al., "Genetic Diversity in <i>Bradyrhizobium japonicum</i> Serogroup 123 and Its Relation to Genotype-Specific Nodulation of Soybean," <i>Applied and Environmental Microbiology</i> , 53(11), 2624-2630 (1987).
RV	X	Sadowsky et al., "Use of Phytoremediation Strategies to Bioremediate Contaminated Soils and Water," <i>Biology of Plant-Microbe Interactions</i> , International Society for Molecular Plant-Microbe Interactions, pages 527-532 (1996).
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RY		Shao et al., "Cloning of the Genes for Degradation of the Herbicides EPTC (S-Ethyl Dipropylthiocarbamate) and Atrazine from <i>Rhodococcus</i> sp. Strain TE1," <i>Applied and Environmental Microbiology</i> , 61(5), 2061-2065 (1995).
NA		Shao et al., "Cloning and Expression of the s-Triazine Hydrolase Gene ( <i>trzA</i> ) from <i>Rhodococcus corallinus</i> and Development of <i>Rhodococcus</i> Recombinant Strains Capable of Dealkylating and Dechlorinating the Herbicide Atrazine," <i>Journal of Bacteriology</i> , 177(20), 5748-5755 (1995).
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M		U.S. Department of Agriculture-BARD Program, Grant No. 94-34339-1122, obtained from the Department of BARD (1994) Abstract only.
RA	X	USDA "Clean Up Herbicides with Plants," USDA: Putting Research to Work for America, 12 (1997).
Aff		Van Solingen et al., "Fusion of Yeast Spheroplasts," <i>Journal of Bacteriology</i> , 130(2), 946-947 (1977).
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RA	X	Wych et al., "Simultaneous Measurement of Nitrogen Fixation Estimated by Acetylene-Ethylene Assay and Nitrate Absorption by Soybeans," <i>Plant Physiology</i> , 62:443-448 (1978).
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